We claim:

1. An improvement in a method of microfabricating elastomeric material having a characterizing surface tension comprising decreasing the surface tension of the elastomeric material and photolithographically processing the elastomeric material with decreased surface tension.

2. The improvement of claim 1 where decreasing the surface tension of the elastomeric material comprising forming a silicon dioxide layer on the elastomeric material.

3. The improvement of claim 2 where forming a silicon dioxide layer on the elastomeric material comprises sputter deposing silicon dioxide on the elastomeric material.

4. The improvement of claim 2 where sputter deposing silicon dioxide on the elastomeric material comprises sputter deposing silicon dioxide in an argon-oxygen plasma.

5. The improvement of claim 1 where decreasing the surface tension of the elastomeric material comprising forming a silicon nitride layer on the elastomeric material.

6. The improvement of claim 5 where forming a silicon nitride layer on the elastomeric material comprises sputter deposing silicon nitride on the elastomeric material.

7. The improvement of claim 6 where sputter deposing silicon nitride on the elastomeric material comprises sputter deposing silicon nitride in an argon-nitrogen plasma.

8. The improvement of claim 1 where decreasing the surface tension of the elastomeric material comprising forming a silicon layer on the elastomeric material.

9. The improvement of claim 8 where forming a silicon layer on the elastomeric material comprises sputter deposing silicon on the elastomeric material.

10. The improvement of claim 9 where sputter deposing silicon on the elastomeric material comprises sputter deposing silicon in an argon plasma.

11. The improvement of claim 2 further comprising forming a silicon nitride layer on the silicon dioxide layer.

12. The improvement of claim 11 where forming a silicon nitride layer comprises sputter deposing silicon nitride on the silicon dioxide layer.

13. The improvement of claim 12 where sputter deposing silicon nitride on the comprises sputter deposing silicon nitride in an argon-nitrogen plasma.

14. The method of claim 1 where decreasing the surface tension of the elastomeric material decreases the surface tension of poydimethylsilicone.

15. The method of claim 1 where decreasing the surface tension of the elastomeric material decreases the surface tension of a room temperature vulcanizable (RTV) silicone elastomer.

16. A method of directionally etching an elastomeric material comprising providing an RF plasma etching system, creating an oxygen plasma in the presence of Freon in the RF plasma etching system, removing silicon tetrafluoride from the RF plasma etching system.

17. The method of claim 16 where removing silicon tetrafluoride from the RF plasma etching system comprises pumping the silicon tetrafluoride out of the RF plasma etching system.

18. The method of claim 16 where creating an oxygen plasma in the presence of Freon comprises creating the oxygen plasma in an approximately 90% oxygen and 10% Freon mixture.

19. The method of claim 16 where removing silicon tetrafluoride from the RF plasma etching system comprises maintaining the oxygen plasma under a partial vacuum of approximately 400 mTorr.

20. A method of directionally etching an elastomeric material comprising the steps of providing an RF plasma etching system, creating an oxygen plasma in the presence of Freon in the RF plasma etching system, and removing silicon tetrafluoride from the RF plasma etching system.